20-2-44/60

New Data Concerning the Stratigraphy of the Upper Part of the Lower Carboniferous of the Eastern Slope of the Central Urals

(level C_1^V4) should be attributed to the lower Namur. It was found to be quite possible to employ the brachiopods for purposes of stratigraphic division of the, from lithological point of view, rather uniform carbonate mass of the lower Carboniferous of the Eastern Slope of the Central Ural. The author of the present paper has selected characteristic brachiopod complexes that make it possible to draw a justified dividing line between the Visé and the Namur steps. The latter step is divided into a lower and an upper part. There are some indications that it might be possible to find a connection between the levels selected with respect to their brachiopods and the corresponding sediments of other areas. This will be of practical significance for geological research work, moreover as the brachiopods represent the most frequently occurring group of fossils in the deposits of that area. In addition, the field conditions can be determined. Finally, the data thus made available contribute to a more precise characterization of the Namur step, the extent, limitations and even independence of which have recently been subject of a lively discussion.

Card 2/3

20-2-44/60

New Data Concerning the Stratigraphy of the Upper Part of the Lower Carboniferous of the Eastern Slope of the Central Urals

PRESENTED: November 19, 1956, by D. V. Nalivkin, Member of the Academy

SUBMITTED: November 13, 1956

AVAILABLE: Library of Congress

Card 3/3

GUSEVA, S.N.

Some speriferids from Namurian sediments of the eastern slope of the Urals. Zap. LGI 36 no. 2:3-14 '59. (MIRA 13:12)
(Ural Mountains--Brachiopoda, Fossil)

Guseva, S.N.

4E2c

7

Flux for soldering aluminum wire. A. G. Shikher, S. N. Guseva, and S. V. Radilov. U.S.S.R. 102,654, Apr. 30, 1956. An aq. soln. contg. a mixt. of bi- and trivalent Fe is used as flux when joining Al wires with soft solder.

M. Hosch

SHIKHER, A.G.; GUSEVA, S.N.; RADILOV, S.V.

Soldering aluminum conductors. Prom.energ. 11 no.11:9-11
N '56. (MLRA 9:12)

1. Ivanovskiy energeticheskiy institut.
(Aluminum) (Electric conductors) (Solder and soldering)

VITKIN, A.I., doktor tekhn.nauk; PARAMONOV, V.A., inzh.; GUSEVA, S.S., inzh.

Combining technological processes of sheet steel production in one continuous line. Sbor. trud. TSNIICHM no.28:35-39 '62. (MIRA 15:11)

(Rolling (Metalwork)) (Assembly line methods)

SHCHERBACHEVA, M.A.; GUSEVA, S.S.

Conditions for the determination of the swelling index of rubber. (MIRA 10:11)
Kauch. i rez. 16 no.8:15-18 Ag '57.

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Elastomers--Testing) (Hydrocarbons)

ZOLOTOVA, L.V. (Leningrad, D-36, ul. Vosstaniya, d.10, kv.20); GUSEVA, T.F.
(Leningrad, L-5, Izmaylovskiy pr., d.11, kv.45)

Inhibiting effect of certain substances related to purine on the growth of Ehrlich tumor. Vop.onk. 5 no.9:362-364 '59. (MIRA 12:12)

1. Iz kafedry farmatsevticheskoy khimii (zav. - prof. A.M. Khaletskiy), kafedry anatomii i fiziologii (zav. - dots. A.V. Loginov) Leningradskogo khimiko-farmatsevticheskogo instituta (dir. - dots. A.G. Yegorov), laboratorii eksperimental'noy onkologii (zav. - chlen-korrespondent AMN SSSR prof. L.M. Shabad) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov).

(PURINES pharmacol)
(NEOPLASMS exper.)
(AMIDINES pharmacol)

YEFIMOVA, A.M.; VOL'FZON, N.I.; GUSEVA, T.F.

Method for studying the action of actinomycetes in culture liquids on Ehrlich's tumor. Eksp. i klin. issl. po antibiot. 1:311-317 '58. (MIRA 15:5)

(ACTINOMYCES) (CANCER)

VOL'FSON, N.I.; MOROZ, P.E.; YEFIMOVA, A.M.; GUSEVA, T.F.

Evaluation by various methods of intravital microscopy of the depth of the lesion from Ehrlich tumor cells in vitro. Eksp. i klin. issl. po antibiot. 1:318-324 '58. (MIRA 15:5)
(CANCER) (MICROSCOPY)

GUSEVA, T.F.; VOL'FSON, N.I.; ZOLOTOVA, L.V.

Effect of 4-oxo-6-imino-2,1-pyrimidine-3-thiadiazole and its combination with some other antitumorous preparations on the growth of Ehrlich's tumor. Trudy Len.khim.-farm.inst. no.13:142-149 '62.
(MIRA 15:10)

1. Kafedra anatomii i fiziologii Leningradskogo khimiko-farmatsevticheskogo instituta (zav. dotsent A.V.Loginov) i laboratoriya eksperimental'noy onkologii Instituta onkologii AMN SSSR (zav. prof. L.M.Shabad).
(THIADIAZOLE) (TUMORS) (CYTOTOXIC DRUGS)

GUSEVA, T.M., aspirantka

Practices in using Trichogramma against the European corn borer. Zashch.rast.ot vred.i bol. 7 no.5:30 My '62. (MIRA 15:11)

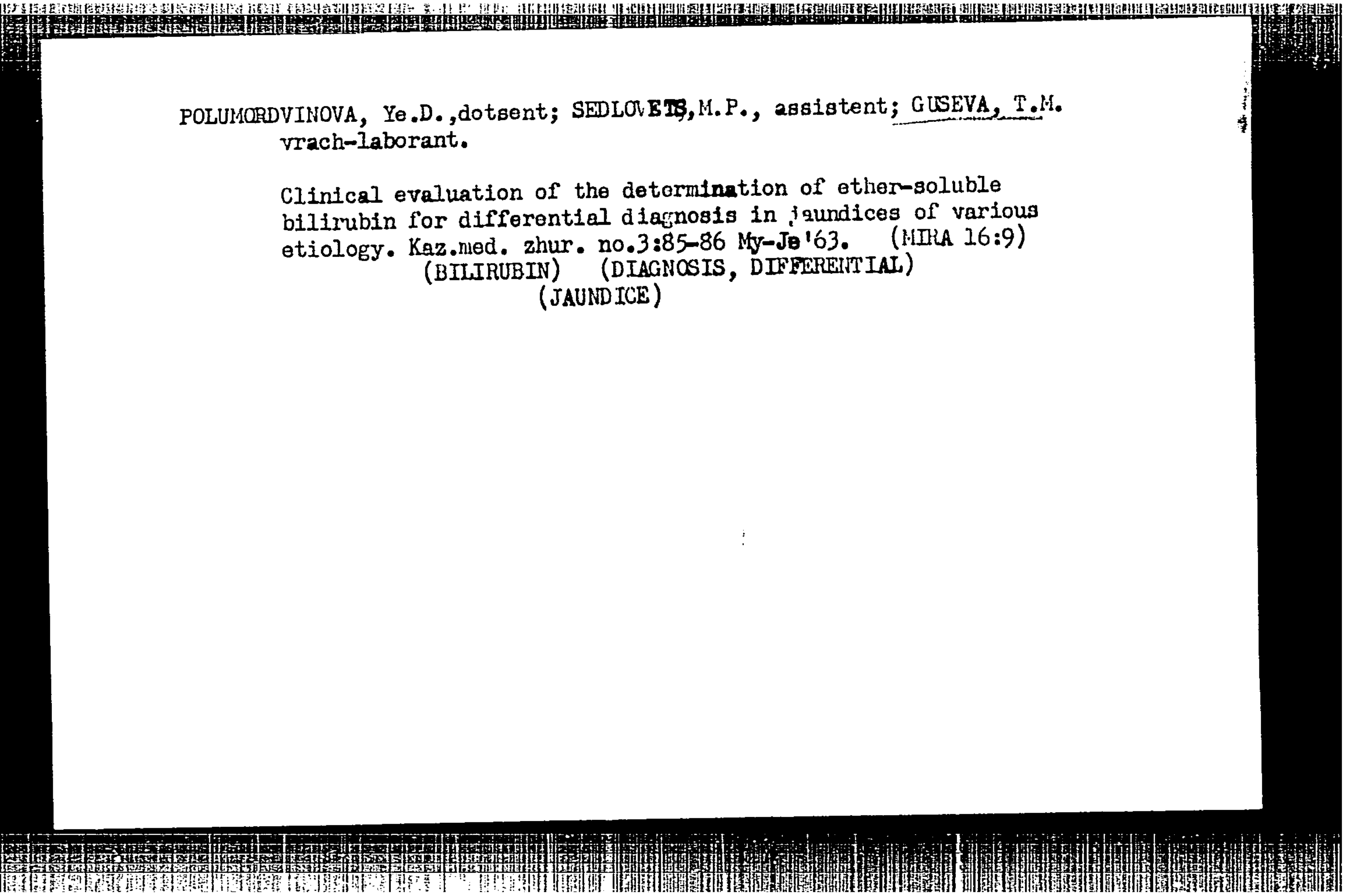
1. Ukrainskiy institut zashchity rasteniy.
(Bukovina--European corn borer--Biological control)
(Thichogramma)

POLUMORDVINOVA, Ye. D.; SEDLOVETS, M. P.; GUSEVA, T. M.

Ether-soluble bilirubin in Botkin's disease. Terap. arkh. 34 no.4:82-87 '62. (MIRA 15:6)

1. Iz kafedry infektsionnykh bolezney (zav. - prof. K. V. Bunin) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I. M. Sechenova na baze 1-y infektsionnoy gorodskoy klinicheskoy bol'nitsy.

(HEPATITIS, INFECTIOUS) (BILIRUBIN)



POLUMORDVINOVA, Ye.D.,dotsent; SEDLOVETS,M.P., assistent; GUSEVA, T.M.
vrach-laborant.

Clinical evaluation of the determination of ether-soluble
bilirubin for differential diagnosis in jaundices of various
etiology. Kaz.med. zhur. no.3:85-86 My-Je'63. (MIRA 16:9)
(BILIRUBIN) (DIAGNOSIS, DIFFERENTIAL)
(JAUNDICE)

NOVAKOVSKAYA, A.A.; TIKHOMIROVA, A.N.; GUSEVA, T.M.

Catechin content in the urine, blood coagulation time and the thrombocyte count in patients with acute dysentery on a background of vitamin P and ascorbic acid administration. Vop. pit. 22 no.3:19-22 My-Je '63. (MIRA 17:8)

1. Iz kafedry infektsionnykh bolezney (zav. - prof. K.V. Bunin) I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova i iz otdela vitaminologii (zav. - prof. V.V. Yefremov) Instituta pitaniya AMN SSSR, Moskva.

SEMENDYAYEVA, M.Ye.; GUSEVA, T.M.; PONOMAREVA, O.A.; LAPKINA, G.V.;
MIKIRTUMOV, S.M.

Activity of arginase in the blood serum and points of the liver during Botkin's epidemic hepatitis. Vop.med.virus. no.9:275-281 '64. (MIRA 18:4)

1. Iz laboratorii deystvitel'nogo chlena AMN SSSR prof. Ye.M. Tareyeva.

POKROVSKIY, V.I.; GUSEVA, T.M.

Changes in the blood serum electrolyte levels in purulent meningitis following the use of massive penicillin doses. Antibiotiki 9 no.2:156-158 F '64. (MIRA 17:12)

1. Kafedra infektsionnykh bolezney (zav.- prof. K.V. Bunin). I Moskovskogo meditsinskogo instituta i gruppa deystvitel'nogo chlena AMN SSSR prof. Ye.M. Tareyeva na baze Moskovskoy infektsionnoy gorodskoy klinicheskoy bol'nitsy No.7.

BLYUMENTAL', R.M.; GIRICH, A.I.; GONCHARIK, A.K.; GUSEVA, T.P.; ZHITKOVA, L.A.; IOFFE, A.M.; KULEMIN, P.D.; LEVINA, L.I.; OSHKIN, P.A.; PAPROTSKIY, T.V.; RYAKHINOV, A.N.; SAMSONOV, N.A.; TULAYKOV, V.N.; USTINOV, I.M.; FAYN, B.P.; SHIFRIN, D.L.; KOLOTILOV, Vasiliy Ivanovich, red.; SVYATITSKAYA, K.P., vedushchiy red.; TROFIMOV, A.V., tekhn.red.

[Equipment for the petroleum industry] Neftianoe oborudovanie. Vol. 5 [Petroleum valves and fittings] Neftianaia armatura. Moskva, Gos. nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. 1958. 247 p. (MIRA 12:1)

(Petroleum industry--Equipment and supplies)

VORODIN, Boris Aleksandrovich; GUSEVA, T.S., red.; KREYS, I.G.,
tekhn.red.

[Semiconductors] Poluprovodniki. Moskva, Gos.uchebno-pedagog.
izd-vo M-va prosv.RSFSR, 1960. 71 p.
(MIRA 14:1)

(Semiconductors)

KUDRYAVTSEV, Pavel Stepanovich; KONFEDERATOV, Ivan Yakovlevich;
MIKHALKEVICH, T.V., red.; GUSEVA, T.S., red.; NATAPOV, M.I.,
tekhn.red.; MAKHOVA, N.N., tekhn.red.

[History of physics and engineering; a textbook for students in teachers' colleges] Istoriia fiziki i tekhniki; uchebnoe posobie dlia studentov pedagogicheskikh institutov. Moskva, Gos. uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 507 p. (MIRA 14:3)

(Physics) (Engineering)

SAKHAROV, Dmitriy Ivanovich; GUSEVA, T.S., red.; ZYKINA, T.N.,
tekhn. red.

[Problems in physics] Sbornik zadach po fizike. Izd.10, ispr. Moskva, Uchpedgiz, 1963. 286 p. (MIRA 16:10)
(Physics--Problems, exercises, etc.)

PETUKHOV, G.G.; GUSEVA, T.V.

Refractometric determination of deuterium in organic compounds.
Zhur.anal.khim. 17 no.1:140-141 Ja-F '62. (MIRA 15:2)

1. Scientific Research Institute of Chemistry of N.I.Lobachevsky
Gorky State University.
(Deuterium--Analysis) (Refractometry)

PETUKHOV, G.G.; GUSEVA, T.V.

Determination of chlorine in polychlorovinyl and perchlorovinyl resins using the reduction method. Zav.lab. 29 no.7:806-807 '63. (MIRA 16:8)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete.
(Chlorine--Analysis) (Resins, Synthetic)

PETUKHOV, G.G.; GUSEVA, T.V.

Reduction method for determining chlorine and bromine in organic substances. Zav.lab. 30 no.3:276-277 '64. (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut khimii, Gor'kiy.

PETUKHOV, G.G.; GUSEVA, T.V.

Determination of iodine in organoiodine compounds by the reduction method. Zav. lab. 30 no.9:1071-1072 '64. (MIRA 18:3)

1. Gor'kovskiy gosudarstvennyy universitet imeni Lobachevskogo.

AKHRIYANOVA, A.; GUSEVA, V.; KUTNOVA, R.

Factory conference for the survey of articles of the "Khimicheskie volokna." Khim.volok. no.5:79 '61. (MIRA 14:10)
(Textile fibers, Synthetic--Periodicals)

GUSEVA, V.A, (USSR)

"Influence of Small Doses of Colbat-60 and X-Rays on Plant Biochemistry and Yields."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

GUSEVA, V. A.

Guseva, V. A. - "Fertilizer with carbon dioxide as a factor changing the relation ship between staminate and pistillate flowers of cucumbers", Uchen. zapiskiGor'k. gos. un-ta, Issue 14, 1949, p. 247-55, - Bibliog: 8 items.

GUSEVA, V.A.

GUSEVA, V. A. "The effect of increased concentrations of carbonic acid on the oxidation-reduction activity of plants", Uchen. zapiski Gor'k. gos. un-ta, Issue 14, 1949, p. 257-64, Bibliog: 6 items.

SO: U-4631, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949).

GUSEVA, V. A.

"New data on the biochemistry of juniper berries", (For use In the food industry), Authors: N. F. Krasinskiy, V. A. Valutina, A. V. Vidmanova, and V. A. Guseva, Uchen. zapiski Gor'k gos. un-ta, Issue 14, 1949, p. 333-45, - Bibliog: 6 items.

SO: U-4631, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949).

GUSEVA, V.A.; ZOTOV, V.P.; KLEBANOV, M.K.; TSLAF, M.Ya.

Analog control systems for drilling machines. Mashinostroitel' no.7:6-8 Jl '63. (MIRA 16:9)
(Drilling and boring machinery--Numerical control)

GORODISSKAYA, G.Ya., prof., doktor med. nauk, otv. red.; BLOKHINA, I.N., red.; GUSEVA, V.A., red.; DIKOVSKIY, F.F., red.; ZIMINA, V.S., red.; LAZOVSKAYA, A.L., red.; PEROVA, R.S., red.

[Biochemistry of microbes] Biokhimiia mikrobov; sbornik trudov. Gor'kii, 1964. 427 p. (MIRA 17:12)

1. Gorki. Gor'kovskiy nauchno-issledovatel'skiy institut epidemiologii i mikrobiologii.

GUSEVA, V.A.

Effect of a mixture of bread and eggs on the motor function of the gallbladder in some diseases of the gastrointestinal tract. Trudy 1-go MMI 39:115-124 '65. (MIRA 18:9)

FAYBUSOVICH, G.M.; GUSEVA, V.A.

State of bile ducts in opisthorchosis; clinical and radiographic comparisons. Med. paraz.i paraz.bol. 34 no.4:410-414 Jl-Ag '65. (MIRA 18:12)

1. Kafedra rentgenologii i radiologii I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova i klinicheskiy otdel Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I.Martsinovskogo. Submitted March 21, 1965.

BACHURIN, N.I., inzh.; GUSEVA, V.B., inzh.

Methods for preparing molds for cast high-voltage insulation.
Vest. elektroprom. 32 no.12:52-55 D '61. (MIRA 14:12)
(Electric insulators and insulation)
(Plastics--Molding)

Guseva, V.G.

4

Isolation, purification, and properties of actinomycins produced by various cultures of actinomycetes antagonists. M. G. Brazhnikova, N. N. Lomakina, V. G. Guseva, and E. S. Kudrina. *Antibiotiki* 1, No. 4, 3-5(1956).—A group of bright red, crystalline antibiotics were obtained from cultures of the actinomycetes antagonists, *Actinomyces mutabilis*, *Streptomyces flaveolus* var. *rectus*, *A. albicans* var. *spiralis*, and *Nocardia bicolor*. By their antibacterial spectra, points of fusion, solubilities, and method of isolation from liquid cultures they resemble the actinomycins. Like the latter, the new antibiotics were found to be chromopeptides and can be classified with the actinomycin group (cf. *C.A.* 48, 40455). D. M. Chen

SOV-101-58-4-1/12

AUTHORS: Astreyeva, O.M.; Guseva, V.I.; Popov, N.S.

TITLE: The Study of Hydration Processes by Means of a Microscopic Motion Picture Assembly (Izucheniye protsessov gidratatsii pri pomoshchi mikrokinoustanovki)

PERIODICAL: Tsement, 1958, Nr 4, pp 1-4 (USSR)

ABSTRACT: The authors describe methods of observing cement hydration processes thru microscopic and photographic studies. The hydration speed of various minerals, the increase in size and quantity of crystals, the transition from one crystalline form into the other, and the decomposition of aluminum hydrosulfate were determined. However, the kinetics of the process and the transition of the crystalline forms were not successfully established. Gypsum was the first material to be studied. The MKU-1 microscope assembly (Figure 1), was used. The authors conclude: 1) Gypsum dissolves in the same way in all solvents used, excluding "vinsol" solution. 2) The rates at which the semihydrate was dissolved and $CaSO_4 \cdot 2H_2O$ was formed were different. For minute amounts, the duration of this process in distilled water was 30 - 40 minutes, and in water with additives, 5 - 8 hours. 3) Numer-

Card 1/2

SOV-101-58-4-1/12

The Study of Hydration Processes by Means of a Microscopic Motion Picture Assembly

ous nuclei and very thin needle-shaped crystals were formed. 4) In vinsol solutions, $CaSO_4 \cdot 2H_2O$ crystals were formed in reduced quantities but the crystals were larger in size. In naphtha soap solution, crystallization occured only in close proximity to aggregations of semihydrate fragments. Microcine-photography of clinker hydration processes is now being carried out.

There are 7 sets of photos.

1. Gypsum--Hydrolysis 2. Photography--Applications 3. Microscopes--Applications

Card 2/2

57

L 8766-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM S/2982/63/000/044/0048/004

ACCESSION NR: AT4008699

AUTHOR: Guseva, V.I., Lukashevich, I.P., Susanina, O.G., Markova, L.M., Troitskaya, N.I.

TITLE: Petroleum refining products as softeners-fillers for butadiene-styrene rubbers

SOURCE: Moscow. Institut neftekhimicheskoy i gazovoy promy*shlennosti. Trudy*, no. 44, 1963. Neftekhimiya, pererabotka nefti i gaza, 48-57

TOPIC TAGS: petroleum product, plasticizer, filler, butadiene styrene, rubber, oil refining, oil butadiene styrene rubber filler, butadiene styrene rubber plasticizer, oil refining product, low temperature resistant rubber, oil filled rubber, rubber softener, softenor, rubber plasticizer

ABSTRACT: The use of a wide variety of petroleum products as softeners and fillers for rubbers was investigated. The physical-chemical properties of the petroleum fractions and the compounds separated from them were analyzed. It was found that aromatic hydrocarbons combine with rubber better than the paraffin-naphthenic type. A change from light to heavy aromatic hydrocarbons causes an increase in the internal friction coefficient and the tensile and rupture strength of the rubber, along with a

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L 8766-65
ACCESSION NR: AT4008699

decrease in elasticity and frost resistance. Light aromatic hydrocarbons with a ring number of 1.7-2.0 and an aniline point no higher than 70C, as well as medium hydrocarbons with a ring number of 2.5-3.0 and an aniline point no higher than 60C, combine well with and guarantee high vulcanized rubbers. Paraffin-naphthenic hydrocarbons with a ring number of 2.5-3.5 and an aniline point no higher than 125C also give suitable results. Rubbers containing avtol 18 were compared with those containing other petroleum products. It was noted that rubbers with refined and deparaffined oils having a lower aromatic hydrocarbon content possess a lower brittleness temperature, higher elasticity and significantly lower stability than rubbers with avtol 18. However, they are deficient in the sense that they exude oil. The physical-mechanical properties of rubbers containing deasphalted tar oil are comparable to those containing avtol 18. Adding raffinate P to rubbers causes a high stability with large doses and high elasticity at increased temperatures. The use of softeners and fillers is necessary in order to obtain sufficiently high physical-mechanical properties and a high elasticity for rubbers. An example of a softenor-filler is a secondary raffinate obtained by selective refining and removal of paraffin-naphthenate and naphthene-aromatic hydrocarbons. Several methods are preposed for obtaining products of this type; separation by cooling an

Card 2/3

L 8766-65

ACCESSION NR: AT4008699

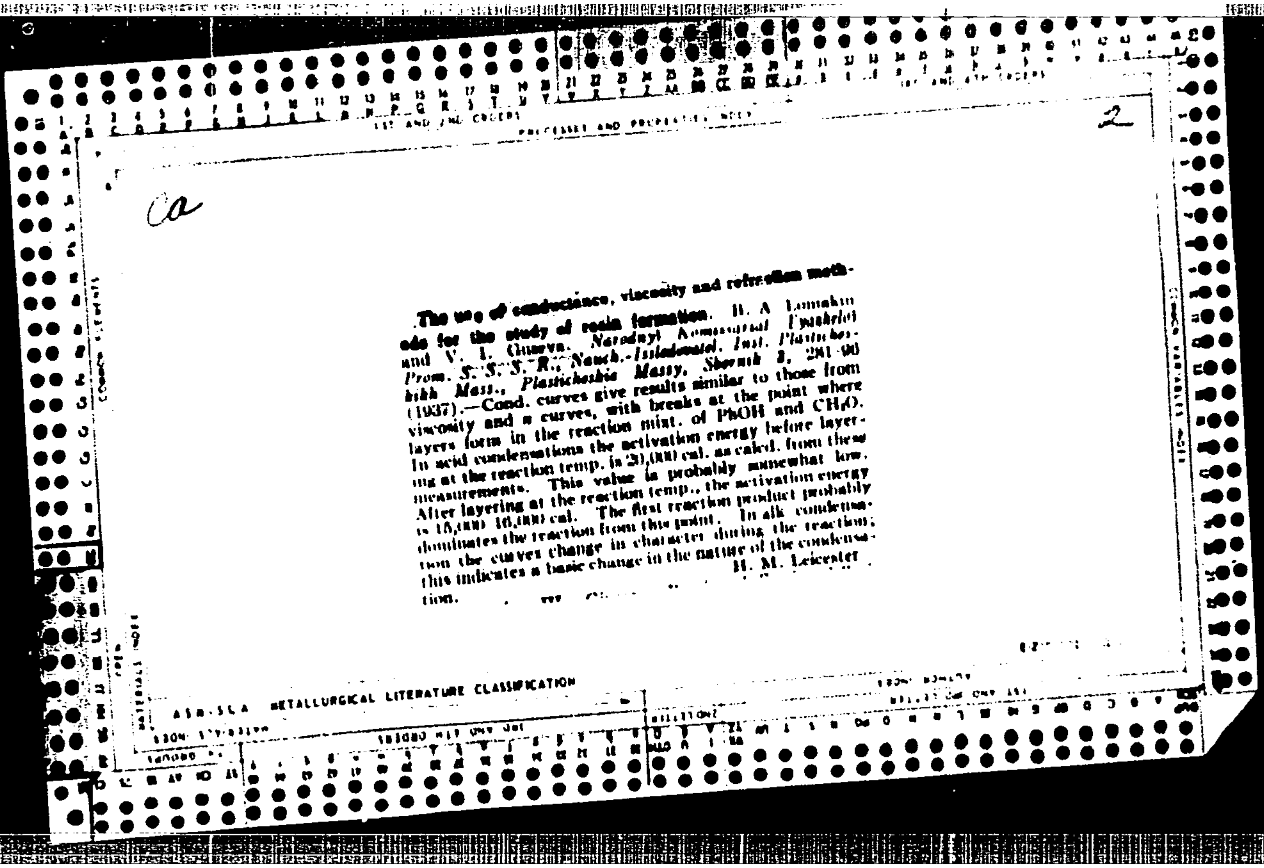
extracted phenol solution gives the best results. Orig. art. has: 5 tables.

ASSOCIATION: Institut neftekhimicheskoy i gazovoy promy*shlennosti, Moscow. (Institute of the Petroleum Chemistry and Gas Industry)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, OC

NO REF SOV: 000 OTHER: 003

Card 3/3



1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Ca

2

The use of conductance, viscosity and refraction methods for the study of resin formation. B. A. Lomakin and V. I. Guseva. *Narodnyi Komissariat Tyazheloi Prom. S.S.S.R., Nauch.-Issledovatel. Inst. Plasticheskikh Mass., Plasticheskie Massy, Sbornik* 1, 281-90 (1937).—Cond. curves give results similar to those from viscosity and n curves, with breaks at the point where layers form in the reaction mixt. of PhOH and CH_2O. In acid condensations the activation energy before layering at the reaction temp. is 20,000 cal. as calcd. from these measurements. This value is probably somewhat low. After layering at the reaction temp., the activation energy is 15,000-16,000 cal. The first reaction product probably dominates the reaction from this point. In alk. condensation the curves change in character during the reaction; this indicates a basic change in the nature of the condensation. H. M. Leicester

CA

Determination of the heat conductivities of the products of synthetic rubber B manufacture in the gaseous phase. [illegible] V. Guseva. *Sbornik Trudov Opytnogo* [illegible] *Lebedeva* 1938, 11-7; *Khim. Referat. Zhur.* 1939, No. [illegible], 118.—The conds. of gases were detd. by [illegible] of Schleiermacher from the change in resistance of a Pt wire 36.5 cm. long, about 0.04 mm. [illegible] along the axis of a glass cylinder filled with [illegible] investigation at 760 mm. Hg pressure [illegible] made at 0, 25, 50 and 75° by comparing the [illegible] of the vapors of the substances under investigation with the heat conds. of vapors of control substances (ether, benzene). The Pt wire was heated by a current at 0.5, [illegible] and 10 v. The change in resistance of the wire was measured with a Wheatstone bridge. The following values of *k* were obtained (*k* = heat cond. in cal. per cm. per sec. per degree): amylene 2.825 × 10 [illegible] piperylene 2.778 × 10 [illegible] 0.0174 × 10 [illegible]

[illegible]

GUSEVA, V. I.

GUSEVA, V. I. - " Investigation of the Physicochemical Properties of Latex From Kok-Saghyz at Various Stages of Vegetation of the Plants." Sub 23 Jun 52, Moscow Inst of Fine Chemical Technology imeni M. V. Lomonosov. (Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Vechernaya Moskva January-December 1952

GUSEVA, V.I.

15

Strengthening of rubber in latex. B. A. Dogadkin, L. G. Senatorskaya, V. I. Guseva, A. V. Suslyakov, and P. I. Zakharchenko (Sci. Research Inst. Tire Ind., Moscow). Kolloid. Zhur. 18, 668-76(1956).—Strong vulcanizates (I) can be obtained from a latex of butadiene-styrene (II) emulsified with Na dibutylnaphthalenesulfonate, if 2 g. casein (III) together with 40 g. Channel Black (IV) (dispersed in a colloid mill), captax, (HOC$_2$H$_4$)$_3$N, ZnO, and S are added to 100 g. II. Gelatin and Na alginate have an effect similar to but less than that of III. Presumably III causes contact between II and IV by removing the protecting film from the latex globules; III induces aggregation between II and IV, and the aggregates have a higher rate of sedimentation than in the absence of III. The favorable effect of III can be counteracted by a stabilizer (OP-10, a reaction product of ethylene oxide and alkylphenols is used) which prevents aggregation. The breaking stress of I increases with the fineness of IV and its amt. (0-60%); it is greater when vulcanization is carried out in a press than when the sample is in air; also the rate of reaction with S is greater in a press. The relative elongation, the residual elongation, and the max. swelling in xylene are greater after vulcanization in air. Coagulation of the latex with electrolytes results in stronger I than does drying; presumably, coagulation leaves some protective material behind. An increase in the concn. of IV raises the modulus of elasticity, ripping strength, and Shore hardness, and lowers relative elongation and rebound. At 40% IV, the highest breaking stress is 25[illegible] kg./sq. cm. against 207 for I made in the usual way (not from a latex).

J. J. Bikerman

GUSEVA, V. I.

"Rubber and Synthetic Rubber," B. A. Dogadkin, P.I. Zakharchenko, A. V. Suslakov, L.G. Senatorskaya, B.K. Karmin, and V.I. Guseva. U.S.SR., 105,842, June 25, 1957. To a dispersion of an active filler, e.g., C black, in latex are added substances such as casein, gelatin, or alginates which enhance stabilization an copptn. of the components of the latex compn. M. Hosen

UZINA, R.V.; DOSTYAN, M.S.; GUSEVA, V.I.; KALININA, A.A.

Latex-carbon black compounds for impregnation of tire cord. Kauch. i rez. 16 no.12:11-18 D '57. (MIRA 11:3)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Rubber) (Tire fabrics)

GUSEVA, V.I.

31978
S/081/61/000/023/053/061
B106/B101

11.2230

AUTHORS: Betts, G. E., Gubenko, I. B., Karmin, B. K., Lukasievich, I. P., Markova, L. M., Segalevich, A. Ye., Troitskaya, N. I., Chernozhukov, N. I., Guseva, V. I.

TITLE: Test of petroleum products as plasticizer fillers for rubber compounds from divinyl styrene rubber. Communication I

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 560, abstract 23F346. (Tr. N.-i. in-ta shin. prom-sti, sb. 5, 1960, 5-20)

TEXT: For the purpose of examining the possibility of enlarging the raw material basis for the production of olefin rubber, a study has been made of the effect of paraffin-naphthene hydrocarbons (I) and aromatics (II), isolated from different kinds of petroleum at different stages of processing, on the physicomechanical properties of standard rubbers from СКС-30А (SKS-30A). Addition of I and II in an amount of 55% to a mixture of rubber and softener deteriorates the physicomechanical properties of vulcanizates and enhances their elasticity. The tensile strength of rubber containing I drops from 274 (standard rubber) to 173 - 226 kgf/cm^2 while

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31978
S/081/61/000/023/053/061
Test of petroleum products... B106/B101

its tear resistance drops from 81 to 47 - 54 kgf/cm. The tensile strength of rubber containing II drops to 200 - 245 kgf/cm^2 and its tear resistance to 52 - 64 kgf/cm. The thermal stability and the bonding strength of doubled rubbers decrease substantially after vulcanization. High-molecular products of comparatively higher viscosity deteriorate the strength properties of rubber less than do low-molecular ones. A test of 29 products, obtained from differently processed petroleum asphalts, deasphalted products, distillates, and raffinates, have shown that the most interesting of these products are a deasphalted petroleum asphalt, the residual high-viscosity oil, a secondary raffinate, and an aviation tar. These products ensure satisfactory physicomechanical properties, elasticity, and brittleness temperature (-50°C) of vulcanizates. [Abstracter's note: Complete translation.]

Card 2/2

ASTREYEVA, O.M.; GUSEVA, V.I.; POPOV, N.S.

Studying the formation processes of calcium hydrosulfoaluminate using photomicrograph equipment. TSement 27 no.6:23-25 N-D '61. (MIRA 15:3)

(Photomicrography) (Calcium aluminate ferrates)
(Calcium aluminates)

GUSEVA, V.I.; LUKASHEVICH, I.P.; SUSANINA, O.G.; MARKOVA, L.M.;
TROITSKAYA, N.I.

Petroleum refining products as softener-fillers of divinyl styrene rubbers. Trudy MINKHiGP no.44:48-57 '63.
(MIRA 18:5)

LOPATNIKOVA, L.Ya., kand. tekhn. nauk; GUSEVA, V.I., inzh.

Hydration kinetics of tricalcium silicates. Trudy NIITSement no.18: 63-74 '63. (MIRA 18:9)

L 45237-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5010847 UR/0138/65/000/004/C008/0012 31 27 B

AUTHOR: Basiyev, I. M.; Guseva, V. I.; Groysman, M. Ya.; Kantor, F. S.

TITLE: Continuous preparation of carbon black-extended butadiene-styrene rubbers 15 15

SOURCE: Kauchuk i rezina, no. 4, 1965, 8-12

TOPIC TAGS: synthetic rubber, styrene rubber, rubber extender, rubber manufacture, carbon black, butadiene rubber, rubber wear, rubber aging, filler dispersion

ABSTRACT: Experimental data are presented pertaining to the development of a technological process for the preparation of carbon black-extended butadiene-styrene rubbers by means of a continuous pilot assembly including a disperser for the preparation of carbon black dispersions and apparatus for the coagulation of the systems carbon black - latex - oil. The assembly was constructed at the Giprokauchuk. The starting materials employed were butadiene-styrene latex SKS-30ARK, 15 carbon black types KhAF, 15 AySAF, 15 and SAF, 15 and oil PN-6. 15 Optimum loading of surface-active agents was studied by using leikanol and the potassium soap of disproportionated rosin. A satisfactory distribution of carbon black was achieved in the vulcanizates. Thus, the introduction of finely dispersed blacks into the

Card 1/2

L 45237-65
ACCESSION NR: AP5010647

latex insures a better distribution than in the case of dry mixing. The rubber mixtures were vulcanized in a press at 100 atm and 143C for 10, 20, 50, 70, 80, 100, and 120 min. All the vulcanizates obtained from carbon black-extended rubbers had high coefficients of thermal aging and a high wear resistance. The process is recommended for use in industry. "K. V. Pakin and Z. Y. Gordeyeva participated in the work." Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: Giprokauchuk; Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, IE

NO REF SOV: 002 OTHER: 004

Card 2/2

L 31996-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM/GS

ACCESSION NR: AT5004102 S/0000/64/000/000/0170/0173

AUTHOR: Guseva, V. I.; Akutin, M. S.; Zaripova, M. G.; Karmin, B. K.; Kozlova, V. K.; Smirnova, L. N.; Yevstratov, V. F.

TITLE: Wear resistance of vulcanizates based on some new rubber-resin compositions.

SOURCE: Nauchno-tekhnicheskoye soveshchaniye po friktsionnomu iznosu rezin. Moscow, 1961. Friktsionnyy iznos rezin (Frictional wear of rubber); sbornik statey. Moscow, Izd-vo Khimiya, 1964, 170-173

TOPIC TAGS: synthetic rubber, rubber wear, frictional wear, rubber resin vulcanizate, rubber filler, carbon black, rubber mechanical property, butadiene styrene rubber, urea formaldehyde resin, epoxyamine resin

ABSTRACT: The wear resistance and thermo-mechanical properties of vulcanized butadiene-styrene rubber SKS-30ARK, its mixture with epoxyamine resin 89 and urea-formaldehyde resin MFA-155, and also the mechanical properties of the non-vulcanized mixture were studied to establish compositions for optimal service and processing properties. Resin 89 was added to the latex. Tensile strength, relative elongation, residual

Card 1/2

L 31996-65

ACCESSION NR: AT5004102

elongation, and modulus at 300% elongation were measured at 20 and 100C, tear strength at 100C, rebound resilience at 20 and 100C, and hardness, friction -and dynamic-modulus, and wear resistance on the IMI-3 wear tester. The addition of 8% resin 89 markedly improved the mechanical properties and particularly the wear resistance of the vulcanizate, and with additions of 2-20% resin smaller amounts of channel black were required to produce vulcanizates with optimum physical-mechanical properties. Vulcanizates with 8% resin 89 and 45% carbon black showed marked improvement in wear resistance and mechanical parameters except for a decrease in tear strength. The rubber-resin latex, however, showed a significant decrease in extrudability and calendering capacity. Addition of non-specified amount of resin MFA-155 doubled the tensile strength of the latex. Vulcanizates based on the rubber-resin composition with 30% carbon black KhAF had improved aging stability, thermal stability, tear strength, and wear resistance as compared with vulcanizates prepared without resin and with 50% KhAF. Wear of resin-rubber compositions was very little affected by an increase in temperature. Orig. art has: 1 figure and 3 tables.

ASSOCIATION: None

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: MT

NO REF SOV: 002 OTHER: 002

Card 2/2

GUSEVA, V. M. and O. M. ASTREYEVA

"Methods of Studying Cement Hydration Products With an Electron Microscope
p. 399

Transactions of the Fifth Conference on Experimentaland Applied Mineralogy and Petrography, Trudy ... Moscow, Izd-vo AN SSSR, 1958, 516 pp.

reprints of reports presented at conf. held in Leningrad, 26-31 Mar 1956. The purpose of the conf. was to exchange information and coordinate the activities in the fields of experimental and applied mineralogy and petrography, and to stress the increasing complexity of practical problems.

PETROV-SPIRIDONOV, A.Ye., kand.biol.nauk; GUSEVA, V.M.

Division and identification of certain anions by the method of paper chromatography. Izv.TSKhA no.2:230-232 '59.
(MIRA 12:8)

(Chromatographic analysis) (Anions)

GUSEVA, V.N., starshiy nauchnyy sotrudnik

Valuable wild forage plants of the Baraba Steppe and their cultivation. Trudy Bot. sada Zap.-Sib. fil. AN SSSR no.1:85-99 '56.
(MIRA 14:7)

1. Ubinskaya opytno-meliorativnaya stantsiya.
(Baraba Steppe--Forage plants)

GUSEVA, V.N.

Perennial grasses on drained bogs in the first years of the reclamation. Trudy TSSBS no.4:73-86 '60. (MIRA 15:4)
(Barabinskaya Step'--Grasses)

GUSEVA, V.N.

Methods accelerating the growth and development in vetchling Lathyrus Gmelinii (Fisch.). Trudy TSSBS no.5:55-60 '61. (MIRA 15:3)
(Vetchling)

GUSEVA, V.N.

Introduction of Far Eastern rice in Western Siberia. Izv. SO AN SSSR no.4. Ser. biol. - med. nauk no.1:67-70'63. (MIRA 16:8)

1. TSentral'nyy Sibirskiy botanicheskiy sad Sibirskogo otdeleniya AN SSSR, Novosibirsk.

(SIBERIA, WESTERN--RICE)
(SIBERIA, WESTERN--PLANT INTRODUCTION)

GUSEVA, V.N.; FEDOROVA, V.S.

Quality of fodder grasses in the drained bogs of Baraba. Trudy TSSBS no.7:160-163 '64. (MIRA 17:11)

SERGEYEVA-ALAYEVA, V.N.; AVTONEYEVA, N.P.; FROLOVA, R.M.; VOLYNKINA, L.A.;
BOCHKAREV, O.A.; GUSEVA, V.S.

Use of aloe extract and novocaine in combined treatment of parodontitis.
Stomatologiia no.2:22-23 Mr-Ap '54. (MLRA 7:4)

1. Iz stomatologicheskogo otdeleniya (zaveduyushchiy G.A.Kal'yan) poliklinika No.1 (ispolnyayushchiy obyazannost' zaveduyushchego A.G.Chernova), Moskva.
(Teeth--Diseases) (Novocaine--Therapeutic use)

GUSEVA, V.S.; SHAROVA, I.Kh.

Species and distribution of ground beetles in various types of forests in the vicinity of Moscow. Vop. ekol. 7:43-49 '62.
(MIRA 16:5)

1. Gosudarstvennyy pedagogicheskiy institut imeni V.I.Lenina.
(Moscow region—Ground beetles)

GUSEVA, V.V.

Feeds and cutting speeds of gear shaping machines. Avt.i trakt. prom. no.7:35-37 Jl '57. (MIRA 10:11)

1. Moskovskoye vyssheye tekhnicheskoy uchilishche imeni Baumana. (Gear-cutting machines)

AUTHOR: Guseva, V.V., Engineer SOV/122-58-5-14/26

TITLE: The Cutting Forces and the Endurance of Cutters in Gear-shaping (Sily rezaniya i stoykost' dolbyakov pri zubodolblenii)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 5, pp 57 - 60 (USSR)

ABSTRACT: A special load-measuring device developed by the cutting-tool laboratory of MVTU (Moscow Institute of Technology imeni Bauman) was mounted on the worktable of a gear-shaping machine (Fellows type) under the gear blank. The elastic element of the measuring device consists of two thin-walled, cylindrical cups of 1 mm wall thickness and 6 mm bottom thickness. The two cups are disposed back-to-back, their top flanges are placed in sunk spigots at each end of the housing of the device. The two cup bottoms are connected by a large bolt, pre-loaded by a nut. The bolt is the extension of the mandrel on which the gear blank is mounted so that the cutting force increases the tension in one cup and decreases it in the other. The cup walls are provided with resistance wire strain gauges, whose signals are amplified and recorded by an electro-magnetic oscillograph. 18% tungsten,

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SOV/122-58-5-14/26

The Cutting Forces and the Endurance of Cutters in Gear-shaping

high-speed, steel tools were tested, cutting chromium-steel gear blanks at 15 m/min, and a range of advances per stroke between 0.1 and 0.38 mm. The cutting force has proved to be proportional to the advance and the 1.3 power of the gear module. The tool endurance was determined with the help of a tool microscope examination of cutting edge wear. The wear phenomena are described as an initial darkening along the cutting edge, reaching the tip of the tooth after 10 minutes, followed by a bright white line of 0.1 mm width along the tooth flank. After this, the cutting edge begins to round off uniformly. The amount of wear is plotted in Figures 5 and 6 against time at different cutting speeds and different advances per stroke. Up to a speed of 20 m/min and an advance of 0.1, uniform wear proceeds for as long as 10 hours. At higher speeds or advances, a critical rise is observed, e.g. at 50 m/min speed after 3 hours and at 0.38 mm advance after 4 hours. The time between re-grinds is proportional to a constant factor (50 000 to 400 000 for different blank materials) and inversely proportional to the 2.4 power of the speed and a power of the advance equal to twice the square of

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SOV/122-58-5-14/26

The Cutting Forces and the Endurance of Cutters in Gear-shaping

the speed divided by 1 000. This formula is based on a wear criterion equal to 0.6 mm. Best productivity is achieved with an advance of about 0.35 mm and a speed of 20 m/min when cutting teeth of 2.5 mm module.
There are 6 figures

Card 3/3 1. Gears--Machining 2. Cutting tools--Performance

183T79

USSR/Nuclear Physics - Electron-Nuclear Showers May 51

"Generation of Electron-Nuclear Showers in Lead and Graphite," S. A. Azimov, V. V. Guseva, Physico-tech Inst, Acad Sci Uzbek SSR

"Zhur Eksper i Teoret Fiz" Vol XXI, No 5, pp 569-573

Describes expts on study of electron-nuclear showers conducted at height of 3,860 meters with aid of Wilson cloud chamber contg lead and graphite plates. Shows several characteristic photos of the showers produced in lead and graphite. Gives exptl evaluation of flight path of generated particles

183T79

LC

USSR/Nuclear Physics - Electron-Nuclear Showers (Contd) May 51

in electron-nuclear showers, also number of secondary nuclear-active particles. Submitted 10 May 50.

183T79

LC

GUSEVA, V. V.

Guseva, V.V.

6001-RML

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4730

INTERACTION OF COSMIC RAY PARTICLES OF 10^{12} TO 10^{14} ev WITH LIGHT NUCLEI MEASURED AT 4Km ELEVATION. N. G. Birger, V. V. Guseva, O. B. Zhdanov, S. A. Slavatinskii, and G. M. Stashkov. Izvest. Akad. Nauk S.S.S.R. Ser. Fiz. 19, 546(1955) Sept.–Oct. (In Russian)

Most of the observed showers had four or more charged particles. The mean of the angular distribution of shower particles in the center of gravity of the two colliding nucleons was symmetric and close to isotropic. Also, the spectrum of shower particle momenta formed in the light matter was obtained in the interval of 5×10^8 to 3×10^9 ev/c. (R.V.J.)

GUSEVA, V.V.

8

Generation of heavy unstable particles on nuclei of barit. [illegible] N. G. Birger, V. V. Guseva, G. B. Zhdanov, [illegible] Savatinskii and [illegible]

5

Category : USSR/Nuclear Physics - Elementary Particles

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 421 C-3

Author : Birger, N.G., Guseva, V.V., Zhdanov, G.B., Slavatinskiy, S.A., Stashkov, G.M.

Inst : Phys. Inst., USSR Acad. of Sciences

Title : Certain Cases of Generation of Heavy Particles by Nuclei of Be Atoms.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 3, 590-591

Abstract : A Wilson chamber placed in a magnetic field and located at an altitude
of 3860 meters above sea level recorded three showers, generated in Be,
in which the formation and decay in flight of Σ^+, Λ^0, and θ^0 heavy par-
ticles. The angles φ between the plane of generation of the unstable
particle, and the plane of its decay are 57 ± 10°, 74 ± 10°, and 15 ± 5°
respectively. These results can be compared with the fact that in the
case of pair generation of hyperons and K-particles by π^--mesons and
H, the angle φ is in every case less than or equal to 40°. The difference
in the results obtained is apparently due to the presence of secondary pro-
cesses occurring inside the Be nucleus (scattering of hyperons or creation
of hyperons by secondary particles of the shower).

Card : 1/1

AUTHOR: BIRGER,N.G., RIGOROV,N.L.G., GUSEVA,V.V., ŽDANOV,G.B. PA - 2005
SLAVATINSKIJ,S.A., STAŠKOV,G.M.

TITLE: Interaction between Particles of the Cosmic Radiation of the Energy 5.10^9-5.10^{10} eV and the Nuclei of Be-Atoms.

PERIODICAL: Zhurnal Eksperimental'noi i Teoret.Fiziki,1956, Vol 31, Nr 6, pp 971-981 (U.S.S.R.)
Received: 1 / 1957 Reviewed: 3 / 1957

ABSTRACT: This paper studies the production of mesons by particles of the cosmic radiation of more than 5.10^9 eV under conditions which resemble nucleon-nucleon collision as much as possible. For this purpose the authors arranged a WILSON chamber with a Be-plate of 9,8 g/cm^2 thickness in the magnetic field of an electro-magnet of the mean field strength 8500 Ørsted. This WILSON chamber was controlled by a system of counters. These measurements (Scientific Station PAMIR, height 3860 m) lasted a total of 950 hours and furnished about 5300 photographs. 31 photographs show electron nuclear showers with four and more particles and about 10 showers with less (2 or 3) secondary particles were observed. As the events detected by the measuring device amount to about 10% of all interaction acts between nucleons of $\geqslant 5.10^9$ eV and atomic nuclei, showers with few particles are likely to be formed in the case of many interaction acts in the case of the energies mentioned. In this case only the characteristics of those interaction acts are considered on the occasion of which at least four secondary particles are emitted. The corresponding data for these showers are

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shown in a table. The energy of shower-forming particles is then discussed. In the present case interaction cannot be a nucleon-nucleon interaction; the reasons herefore are shown. Next, a condition for the interaction between two nucleons with the production of pions is indicated and specialized for particles with more than 5.10^9 eV. A method for the evaluation of the energy of the primary particle is described. Finally, the distribution of energy over the secondary particles and the angular distribution of particles in the center of mass system is investigated.

Conclusions: The angular distribution of the shower particles in the center of mass system of the two colliding nucleons is almost isotropic. The nucleons flying apart in the center of mass system are anisotropic and that above all in the direction of motion of the primary nucleon. At most 60% of the energy remains for the fastest nucleon. These conclusions can by no means be applied to all cases of interaction acts between nucleons of $E_0 \gg 5.10^9$ eV and Be-nuclei since the cases analyzed here are only an insignificant part of all interaction acts. Comparison between the energy share found in connection with the cases analyzed here and which is transferred to the pions, and other results indicates considerable fluctuations in the characteristics of interaction.

ASSOCIATION: Physical Institute "P.N.LEBEDEV" of the Academy of Sciences, USSR.
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.
Card 2 / 2

GUSEVA, V.V.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1848
AUTHOR BIRGER,N.G., GUSEVA,V.V., KOTEL'NIKOV,K.A., MAKSIMENKO,V.M., RJABIKOV,S.V., SLAVATINSKIJ,S.A., STAŠKOV,G.M.
TITLE The Analysis of the Cases of the Production of Mesons by Particles of Cosmic Radiation. II.
PERIODICAL Žurn.eksp.i teor.fis,31, fasc.6, 982-986 (1956)
Issued: 1 / 1957

Three such cases are described here. For the direct measuring of the energy of the particles producing electron-nucleon showers the authors in the winter of 1955-1956 added a further WILSON chamber fitted below the gap of the electromagnet to their apparatus (described by BIRGER et al., Zurn.eksp.i teor. fis, 31, 971 (1956)). The charged particle is deflected after passage through the upper chamber by the field of the electromagnet with a field strength of about 10^4 Ørsted. In the lower chamber the trace of the primary particle can be followed on a beryllium plate, and from the traces of the secondary particles the point of the production of the shower in the beryllium plate is determined. From the deviation of this point from the direction of the motion of the particle before being deflected in the magnetic field it is possible to determine the momentum and the sign of the charge of the shower-producing particle. In the case under investigation p_{max}=50 BeV/c. However, by using two WILSON chambers the "light intensity" of the device was considerably diminished. Altogether, four pictures of showers with more than four charged secondary particles were taken, from which it was possible to determine

Žurn.eksp.i teor.fis,31, fasc.6, 982-986 (1956) CARD 2 / 2 PA - 1848

the momentum of the primary particles. In the case of three showers it was possible to determine the distribution of the energy of the primary particle over the secondary particles and the angular distribution of the particles in the center of mass system.

Shower No 27.16.: The particle producing this shower, which has a positive charge, is most probably a proton. If a nucleon-nucleon collision is assumed the conservation of energy and momentum within the limits of measuring errors holds, if a neutron emitted under a small angle carried off a momentum of about 2,3 BeV/c. Reaction must then develop according to the scheme $p + p \rightarrow 3\pi^+ + 2\pi^- + p + n$. Conservation of charge excludes the possibility of pn-interaction. The angle of emission and the momentum of the particles are shown in a table.

Shower No 68.18.. The primary particle is apparently a negative pion with ~ 6,5 BeV, which has been produced in the graphite filter arranged above the measuring device. This shower was probably produced by the reaction $\pi^- + n \rightarrow 2\pi^+ + 3\pi^- + p + m\pi^0$, where m denotes the number of neutralized pions.

Shower No 6.116.: The momentum of the primary particle amounted to 54 BeV/c. The process was able to take its course according to one of the following schemes: $p + n \rightarrow 3\pi^+ + 2\pi^- + n + m + k\pi^0$ or $p + p \rightarrow 3\pi^+ + 2\pi^- + p + n + k\pi^0$.

INSTITUTION: Physical Institute "P.N.LEBEDEV" of the Academy of Science in the USSR

GUSEVA, V.V.

0

Distr: 4E3d

8

1-EML

/3753

AN ANALYSIS OF SOME COSMIC RAY MESON PRODUCTION EVENTS. II. N. G. Birger, V. V. Guseva, E. A. Kotel'nikova, V. M. Maksimenko, S. V. Riabikov, S. A. Slavatinskii, and G. M. Stashkov (Academy of Sciences, USSR). Soviet Phys. JETP 4, 836-41 (1957) July.

Three cases of meson production by cosmic rays are described. In each one, the momentum of the primary particle was measured by a magnetic method using two cloud chambers. The analysis confirms the existence of a large spread in the number of secondary particles and in the energy carried away by π mesons. (auth)

EML

Guseva, V.V.

1754

17

INTERACTION OF 5-50 Bev COSMIC RAY PARTICLES WITH Pb NUCLEI. I. N. G. Birger, N. L. Grigorov, V. V. Guseva, G. B. Zhdanov, S. A. Slavatinskii, and G. M. Stashkov (Academy of Sciences, USSR). Soviet Phys. JETP 4, 812-22(1957) July.

Meson production by cosmic ray particles with energy 5 to 50 Bev was investigated in a cloud chamber containing a 9.8 gm/cm^2 Pb plate under conditions closely approximating nucleon-nucleon interaction. Eleven interactions involving formation of four or more secondary charged particles are analyzed in detail. The angular distribution of pions and nucleons in the center-of-mass system of the two colliding nucleons was obtained, as well as the energy distribution of the energy of the primary particle among the various secondary particles. (auth)

Distr: 4E4c/4E3d

24(5) SOV/56-35-4-1/[illegible]

AUTHORS: Guseva, V. V., Zatsepin, G. T., Khristiansen, G. B.

TITLE: On the Angular Distributions of Broad Atmospheric Showers of High Energy (Ob uglovom raspredelenii shirokikh atmosfernykh livney vysokikh energiy)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 4, pp 833-837 (USSR)

ABSTRACT: The present paper deals with experimental investigations of the angular distribution carried out for the purpose of determining the absorption coefficients of high-energy showers (primary particle energy $\gtrsim 10^{17}$eV). The experiments were carried out in an altitude of 3860 m above sea-level. The authors used a cylindrical cloud chamber (illumination depth 6 cm) which had an effective surface of 615 cm^2. The cloud chamber was synchronously connected with a system consisting of many counters (hodoscope arrangement); the photographic equipment was arranged so that the optical axis of the stereoscopic camera formed an angle of 30° with the vertical. The counters were arranged in 5 groups so that there was a horizontal distance of

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On the Angular Distributions of Broad Atmospheric Showers of High Energy SOV/56-35-4-1/52

500 m between each of the first three, whilst the 4. and 5. were 300 m above and under the central group respectively. 5 m above the central group the Wilson chamber was located. The results obtained by the investigation are shown partly by table 3 and figure 4. A total of 75 showers was investigated. Results show that, contrary to the usual opinion, such showers have already passed the maximum of their development in altitudes of several 1000 m above sea-level.

In conclusion, the authors thank N. A. Dobrotin and N. G. Birger for their assistance and advice, and E. S. Levit for helping to carry out measurements. There are 4 figures, 3 tables, and 7 references, 6 of which are Soviet.

Card 2/3

On the Angular Distributions of Broad Atmospheric Showers of High Energy SOV/56-35-4-1/52

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR)
Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 7, 1958

Card 3/3

S/058/61/000/010/017/100
A001/A101

3.2410

AUTHORS: Grigorov, N.L., Guseva, V.V., Dobrotin, N.A., Lebedev, A.M., Kotel'nikov, K.A., Murzin, V.S., Rappoport, P.D., Ryabikov, S.V., Slavatinskiy, S.A.

TITLE: Studying nucleon-nucleon interactions at $\sim 2\text{x}10^{11}$ ev energies

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 96, abstract 10B501 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Moscow, AN SSSR, 1960, 140 - 153)

6

TEXT: The authors present the results of an investigation, by means of the "calorimetric" method, of nucleon-nucleon interactions at energies of $\sim 2\text{x}10^{11}$ ev, conducted at Pamir (3,860 m above sea level). They describe the equipment for determining the energy of primary particles, energy distribution of secondary particles, inelasticity coefficient, and present data on correlated pairs, angular distributions of particles in individual interactions, and consider in detail symmetric and non-symmetric showers.

L. Dorman

[Abstracter's note: Complete translation]

Card 1/1

GUSEVA, V. V.

A STUDY OF THE INTERACTION OF NUCLEOUS WITH ENERGY (I- 5) x 10^{11} ev
WITH LIGHT ATOMIC NUCLEI

N.L. GRIGOVEV, V.V. GUSEVA, N.A. DOBROTIN, K.A. KOTELNIKOV, V.B. MURZIN,
S.V. RYABIKOV, S.A. SLAVATINSKIY

1. The interaction of cosmic-ray nucleons with atomic nuclei has been investigated at 3860 m above sea level (Pamire Station of the Physics Institute, Academy of Sciences, U.S.S.R.) with the aid of an arrangement that permits of a comprehensive study of an individual act of nucear interaction.
2. The arrangement consisted of two cloud chambers with a target of a light substance (LiH in the main series of experiments) interposed between them. In this target the interactions under study were generated. The bottom cloud chamber was placed in a 6500-oersted magnetic field, which enabled us to measure directly the pulses of secondary particles. Under the chambers was a special device ("ionization calorimeter") made up of 120 ionization chambers arranged in 8 trays with filters between them. This device made it possible (from the total amount of energy generated) to determine the energy of the particle that produced the interaction being studied.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

GUSEVA, V. V., DOBROTIN , N. A. , ZELEVINSKAYA, N. G., KOTELNIKOV, K. A., LEBEDEV, A. M., and SLAVATINSKIY, S. A.

"Experimental Data on Nucleon-Nucleon Interactions at the Energy of Hundreds of GEV and their Interpretation."

report SUBMITTED FOR ~~presented at~~ the Intl. Conf. on Cosmic Rays and the Earth Storm (IUPAP) Kyoto, Japan 4-15 Sept 1961.

24.700

S/048/62/026/005/001/022
B102/B104

AUTHORS: Guseva, V. V., Dobrotin, N. A., Zelevinskaya, N. G., Kotel'nikov, K. A., Lebedev, A. M., and Slavatinskiy, S. A.

TITLE: Experimental data on nucleon-nucleon interactions at $\sim$100 Bev and their interpretation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 5, 1962, 549 - 557

/B

TEXT: Experimental data on NN-interactions, obtained by a team of the Laboratory of Cosmic Rays of the Physics Institute AS USSR at its Pamir station (3860 m), are discussed. Photographs of such interactions revealed the presence of showers with asymmetric particle emission in the c.m.s. Of 48 showers, 18 showed marked asymmetry. The data obtained with the arrangement shown in Fig. 1 were evaluated by conventional statistical methods and also by the Monte-Carlo method. It is shown that the probability of asymmetric showers being caused by fluctuations in the meson angular distribution does not exceed some per cent. The fact that the shower symmetry depends on the inelasticity ratio of the interacting nucleons

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Experimental data on...

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allows NN-interactions to be divided into three classes: (1) symmetric showers with small and approximately equal coefficients of inelasticity K_{lab} and K_{mirror}; (2) asymmetric showers with very different coefficients; and (3) symmetric showers with both coefficients being large ($K > 0.4$). It is explicitely shown that the experimental results can be interpreted with the aid of a simple structural model of interactions for the above classes: (1) peripheral -- peripheral interactions; (2) peripheral - central interactions; and (3) central - central interactions. In collisions of class (2), for example, the periphery of one nucleon is assumed to interact with the center of the other. The data obtained also show that an excited meson cloud appears in ~100 Bev NN-collisions, which does not contain the colliding nucleons. In general, this cloud moves slowly relative to the c.m.s., and decomposes isotropically when its temperature reaches a value $T \sim \mu_{\pi}$. The "spectrum" of the radiation or energy distribution of the mesons is comparable with that of an absolutely black body. There are 12 figures.

ASSOCIATION: Laboratoriya kosmicheskikh luchey Fizicheskogo instituta im. P. N. Lebedeva Akademii nauk SSSR (Laboratory of Cosmic Rays of the Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR)

Card 2/2

V. V. GUSEVA, S. A. DUBROVINA, A. M. LEBEDEV, N. E. MOROZOV, L. A. SANKO,
V. V. SOKOLOVSKIY, S. A. SLAVATINSKIY, B. V. TOLKACHEV

Analysis of Experimental Data on Interactions of Nucleions and Atomic Nuclei at High Energies

report submitted for the 8th Intl. Conf. on Cosmic Fays (IUPAP), Jaipur India, 2-14 Dec 1963

L 34714-65 EWG(j)/EWT(m)/FCC/T/EWA(m)-2 IJP(c)

S/0048/64/028/011/1761/1763 23 18 B

ACCESSION NR: AP4049587

AUTHOR: Guseva, V.V.; Dubrovina, S.A.; Lebedev, A.M.; Morozov, A.Ye.; San'ko, L.A.; Sokolovskiy, V.V.; Slavatinskiy, S.A.; Tolkachev, B.V.

14

TITLE: Nucleon-nucleus collisions at high energies /Report, All-Union Conference on the Physics of Cosmic Rays held in Moscow 4 to 10 Oct 1963/

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.11, 1964, 1761-1763

TOPIC TAGS: cosmic ray, high energy interaction, nucleon nucleus interaction, hydrodynamic theory

ABSTRACT: The work presents an attempt to describe the interaction of high-energy (10^{11} to 10^{12}) nucleons with complex nuclei from the standpoint of a succession of statistically independent encounters of the incident particle with the nucleons of the target nucleus. The nucleon interaction cross sections were calculated by the classical method of impact parameters. The Hofstadter data on electron scattering were used to evaluate the proton densities. Numerical calculations were carried out for the cross sections for nuclei with A = 6, 9, 12, 14, 16, 56, 122 and 207. The

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calculated values of σ are in good agreement with the power function $\sigma = \sigma_0 A^{3/4}$. Further, there were calculated the values of the mean fraction $\bar{\Delta}$ of the energy retained by the nucleon after interaction with a complex nucleus. The results of these calculations are compared with the experimental data in Fig. 1 of the Enclosure. The agreement is best (but far from perfect) on the assumption of an inelasticity coefficient 0.35 ($\bar{\Delta}_0 = 0.65$). The values of the anisotropy parameter (proportional to $\sigma/\sigma_{isotropic}$) as a function of the jet multiplicity n_s (which may be taken as a measure of the length of the reaction tube or the number of nucleons with which the incident particle interacts) obtained by interpolation of the experimental data are compared in Fig. 2 of the Enclosure with the functional dependence calculated on the basis of hydrodynamic theory; here the disagreement is substantial. This is interpreted as an argument in favor of the assumption of successive interaction of the incident nucleon with the nuclear nucleons. "The authors are grateful to N.A.Dobrotin, Ye.L.Feynberg, G.B.Zhdanov and D.S.Chernavskiy for discussions and valuable suggestions." Orig.art.has: 4 formulas and [illegible] tables.

L 34714-65

ACCESSION NR: AP4049587

ASSOCIATION: Fizicheskiy institut im.P.N.Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 00

ENCL: 01

SUB CODE: AA, NP

NR REF SOV: 007

OTHER: 002

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ACCESSION NR.: AP4049587

ENCLOSURE: 01

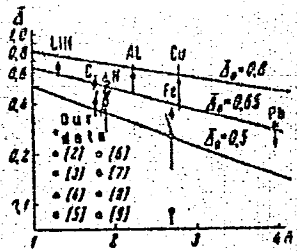

Fig.1. Mean fraction of the energy retained by the nucleon after interaction with different nuclei. Points - experimental (the numbers in brackets are the references from which the data were taken); lines - results of calculations for $\Delta_0 = 0.8$, 0.65 and 0.5.

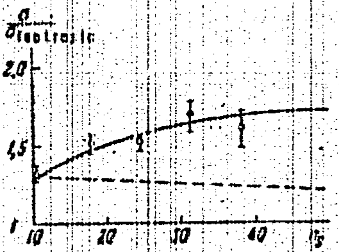

Fig.2. Variation of $\sigma/\sigma_{isotropic}$ with n_s. Solid line - interpolation of experimental data; dashed line - calculations based on the hydrodynamic theory.

Card 4/4

SUSAREV, M.P.; GUSEVA, V.V.

Phase equilibria in the system water - hydrogen chloride-dioxane at 50 C. Zhur.prikl.khim. 37 no. 5:1067-1072 My '64.
(MIRA 17:7)

GUSEVA, V.V.; LEBEDEV, A.M.; SLAVATINSKIY, S.A.; [illegible], V.V.

Interaction between nucleons and complex nuclei at high energies.
Izv. AN SSSR.Ser.fiz. 29 no.10:1935-1937 O '65.

(MIRA 18:10)

L 25771-66 EWT(m)/T

ACC NR: AP6016381 SOURCE CODE: UR/0048/65/029/010/1935/1937

AUTHOR: Guseva, V. V.; Lebedev, A. M.; Slavatinskiy, S. A.; Sokolovskiy, V. V.

40
38
B

ORG: none

14

TITLE: Interaction between nucleons and complex nuclei in the presence of high energies

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 10, 1965, 1935-1937

TOPIC TAGS: nucleon interaction, compound nucleus, nucleon, pion, Wilson cloud chamber, calorimeter, angular distribution, lithium compound

ABSTRACT: The principal features of the interaction between nucleons and complex nuclei in the presence of accelerating energies are satisfactorily described by the model of the cascade-reproduction of nucleons and pions inside the nucleus. In the presence of energies of hundreds of BeV, however, new, interesting features of this interaction may be expected, since the beam of particles generated in the nucleus is strongly collimated. In this connection, the authors discuss the results of the first attempts to quantitatively examine the cascade process in the presence of high energies, made by BARASHENKOV and YELISEYEV(OIYaN Preprint, R-1678), GUSEVA, et al. (Proc. Intern. Conf. Cosmic Rays, Jaipur, Vol 5, 349, 1963), and LEBEDEV et al. (Zh. Eksperim. i Teor. Fiz.,

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L 25771-66

ACC NR: AP6016381

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46, 6,2151 (1964)), and compare these theoretical findings with the experimental findings of GUSEVA et al. (Izv. AN SSSR, Ser. Fiz., 26, 549 1962), obtained with field instruments in the Pamir Mts. In the Pamir experiments a thin copper target (5 g·cm^{-2}) was placed in a Wilson chamber and the primary energy from the target was measured by means of an ionization calorimeter. 14 showers with mean energies of 160 bev were thus observed. In another series of experiments 81 showers from a target consisting of lithium hydride (LiH) above a Wilson chamber were observed. It is established that the theoretically calculated parameter of the anisotropy of angular distribution as a function of the Lorentz factor γ_s of the symmetric dispersion of secondary particles is in agreement with the experimental findings if it is calculated on the basis of the cascade model of the interaction, but it diverges from these findings if it is calculated on the basis of the hydrodynamic mode. The authors thank G. B. Zhdanov and M. I. Tret'yakova for providing the materials for the photoemulsion beams which were received and developed in laboratories of various countries. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 002

Card 2/2

185T81

GUSEVA, Ye. A.

Mar 51

USSR/Metals - Aluminum, Welding

"Power Sources for Argon-Arc Welding of Aluminum Alloys With a Wolfram Electrode," L. A. Mordvintsev, Cand Tech Sci, Ye. A. Guseva, Engr

"Avtogen Delo" No 3, pp 4-7

Expts conducted to compare dc and ac, and to clarify effect of increased idle voltage. Examd 3 devices: app for atomic hydrogen welding of AYeG type, welding transformer STE-34, and Messer-type dc mach. Obtained curves of current and voltage with aid of 3-loop oscillograph.

185T81

ISPIRYAN, G.P., dotsent, kand.tekhn.nauk; CHMELEV, V.S., student; YUPIK, V.P., student; ALAD'YEVA, Ye.I., student; GUSEVA, V.V., student

Economic justification of the optimum program for continuous shoe production lines. Izv.vys.ucheb.zav.; tekh.leg.prom. no.2:3-12 '61. (MIRA 14:5)

1. Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti. Rekomendovana kafedroy ekonomiki promyshlennosti i organizatsii proizvodstva.

(Shoe manufacture) (Assembly-line methods)

AUTHOR: Guseva, Ye. A., Engineer

SOV-135-58-2-3/18

TITLE: Investigation on the Tendency of Weld Joints in Titanium and Its Alloys to Form Cracks (Issledovaniye sklonnosti svarnykh soyedineniy titana iyego splavov k obrazovaniyu treshchin)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 2, pp 10 - 13 (USSR)

ABSTRACT: Existing Soviet and foreign literature gives no exact information on the causes of cold crack formation in titanium weld joints. Results obtained on this subject by work carried out under the supervision of L. A. Mordvintsev, Candidate of Technical Sciences, with the participation of technician V.N. Lazareva, show that cold crack formation is connected with structural changes, entailed by changes of volume which begin in high temperatures and continue over a long period of time at room temperatures. In α-alloys of Ti, the volume increases in proportion to the increasing hydrogen content in the seam metal and in the zone affected by heat. It can be assumed that these changes are caused by

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SOV-135-58-2-3/18

Investigation on the Tendency of Weld Joints in Titanium and Its Alloys to Form Cracks

the falling out of titanium hydride. Increased nitrogen and oxygen content in the joint increases proneness to cracks and reduces plasticity of the weld metal. There are 2 photos, 3 diagrams, 4 graphs, 2 tables, and 13 references, 4 of which are Soviet, 8 English and 1 German.

Card 2/2

1. Titanium alloys--Welding 2. Welded joints--Physical properties